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TRANSFORMING RURAL SECONDARY SCHOOLS IN ZIMBABWE THROUGH TECHNOLOGY: LIVED EXPERIENCES OF STUDENT COMPUTER USERS

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Abstract

A technological divide exists in Zimbabwe between urban and rural schools that puts rural based students at a disadvantage. In Zimbabwe, the government, through the president donated computers to most rural schools in a bid to bridge the digital divide between rural and urban schools. The purpose of this phenomenological study was to understand the experiences of Advanced Level students using computers at two rural boarding Catholic High Schools in Zimbabwe. The study was guided by two research questions: (1) How do Advanced level students in the rural areas use computers at their school? and (2) What is the experience of using computers for Advanced Level students in the rural areas of Zimbabwe? By performing this study, it was possible to understand from the students' experiences whether computer usage was for educational learning or not. The results of the phenomenological study showed that students' experiences can be broadly classified into five themes, namely worthwhile (interesting) experience, accessibility issues, teachers' monopoly, research and social use, and Internet availability. The participants proposed teachers use computers, but not monopolize computer usage. The solution to the computer shortage may be solved by having donors and government help in the acquisitioning of more computers.

Keywords: digital divide, teachers' monopoly, mobile technology, rural high schools, Zimbabwe

1. Introduction

More than 75% of the Zimbabwean population lives in rural areas, and most of these people do not have access to technologies as compared to their urban counterparts (Sithole, 2014). There is a technological or digital divide that exist between urban and rural areas. The digital divide in Zimbabwe is putting a whole generation of rural children and students at a disadvantage. The general youth trail behind the rest of the world in technology (Ganyani, 2015). The students are lagging in the adoption and use of technology through interactions with computers because there are few trained teachers in the rural areas (Konyana & Konyana, 2013), who are also disadvantaged by the same gap.

The effects of this digital divide are enormous and may be felt even after completing high school education. At school, educational achievement will result as a factor of geographical and socio-economic status rather than ability and application (Ncube, 2014). In order to ensure all fairness in education, the digital divide between rural and urban schools especially secondary schools, need to be bridged as a matter of urgency (Ncube, 2014). The only way to bridge the digital divide is to bring technology to rural schools so that students learning in the rural areas are at par with those who attend urban schools (Sithole, 2014). With technology, new opportunities will emerge, educational and economic opportunities will be enhanced, and the quality of life for rural students will ultimately improve (Sithole, 2014).

After finishing high school, it is highly probable that Zimbabwe's urban youths are more apt to find employment, unlike their rural counterparts who have no computer skills (Ganyani, 2015). Rural areas are deprived of the opportunity to grow in terms of technology because there is lack of access to information and communication technologies (ICT) (Sithole, 2012). Wider opportunities for rural students are lost because there is no collaboration with the outside world (Konyana & Konyana, 2013). Schools in rural Zimbabwe need to be the focus of technology enterprise.

In order to bridge this digital divide, the government through various stakeholders, as well as local and international organizations, has partnered with Computers for Zimbabwean Schools (CZwS) to provide computers to schools in rural areas (Sithole, 2012). The government did not only provide schools with affordable computers, but training support and connectivity as well (Sithole, 2012). The aim is to make teachers use computers and Internet based learning programs to enhance student achievement. Students will learn to use computers and thus, be in a better position to compete with their urban counterparts (Sithole, 2015).

2. Literature Review

Various studies (Bukaliya & Mubika, 2011; Kabweza, 2012; Konyana & Konyana, 2013; Sithole, 2014) carried out in Zimbabwe's rural schools have shown that computer use is lower when compared to urban areas. Students in the rural areas face enormous problems in accessing and using computers. The perceptions of students' use of computers seems to be influenced by teachers and administrators. Bukaliya and Mubika (2011) found that although school principals (heads) had positive attitude toward the use of computers, teachers had negative attitudes. One reason given for the negative attitudes was that some teachers were older and had never had the chance to use computers. As a result, they did not trouble themselves with computers when they are on the verge of retiring. Another problem is the phobia of computers and that leads to the resistance of the use of computers at schools (Tshabalala & Ncube, 2014).

Some teachers in the rural areas have never seen a computer, let alone used one (Sithole, 2013). Ncube's (2014) study found that students do not get support and encouragement from teachers and administrators. Most schools in the rural areas are manned by unqualified young teachers who are commonly known as temporary teachers in Zimbabwe. These temporary teachers may lack the skills and necessary training for them to teach computer usage. Some students as well as teachers in the rural areas are nervous about using a computer for the first time and most avoid using it for fear of failing (Sithole, 2013). A whole generation growing up in the rural areas is being disadvantaged because of this lack of access to computers. Musingafi and Chaden'anga (2014) found that the teachers did not use technology to teach because of lack of resources, discouragement by leadership, bad attitude, lack of training and expertise, poor teaching and leadership environment, and work overload.

Teachers in Zimbabwe have not been trained in ICT, and hence have poor practical skills in ICT usage. The majority of them cannot even use the basic software in computers for the delivery of their lessons (Bukaliya & Mubika, 2011). Most students and parents had negative attitudes towards the technical and vocational subjects (Bukaliya & Mubika, 2012). The study by Konyana and Konyana (2013) showed that the only students who used computers were those who were doing Computer Studies as a subject. In other words, those students who were not enrolled in Computer Studies did not have access to the computer.

Madzanire and Meier (2014) found that the majority of urban school learners indicated that they had access to computers at home compared to rural school learners. The researchers concluded that this gap is evidence that there is a huge digital divide between learners in the rural areas and those in the urban areas (Tshabalala & Ncube, 2014). The authors' position is that the more learners are exposed to technology through computers, the more they become skilled at using them.

Another area that can be explored is the use of smartphones which function like computers. Urban learners stated that they had smart phones and would use them to learn, while rural learners did not have access to smart phones (Madzanire & Meier, 2014). Rural-based learners are behind in the use and ownership of smart phones. Schools should consider allowing students to use smart phones because they entertain, motivate, inform, are portable, and easily accessible (Madzanire & Meier, 2014).

The use of computers in schools, whether rural or urban has its benefits. Computers generate information and new knowledge that students would have never grasped had it not been used in their learning. Therefore, ICT in education may be considered as a significant key driver for pupil achievement (Mandoga, Matswetu, & Mhishi, 2013). The use of computers enable students to gain skills necessary for national development (Konyana & Konyana, 2013). ICT enables students to learn independently and to be engaged, thus they take greater control of their learning. When students are aware that they control their destiny in education, it instills them with confidence which may lead to better performance (Mandoga, et al., 2013). Computers are by themselves a motivating factor, and studies have shown that students participate more when ICT based teaching approaches are used (Konyana & Konyana, 2013; Mandoga, et al., 2013). Computer education should be declared compulsory since it is indispensable in both the learning process and research (Madzanire & Meier, 2014). Schools should reduce learning gaps by prioritizing the use of computers as learning and research tools.

2.1. Problems Faced by Schools

There are enormous problems that schools in rural Zimbabwe are facing in fully implementing computer education. Schools in rural areas do not have access to electricity that powers the computers and other technological devices (Konyana & Konyana, 2013). Without electricity it is very difficult to implement ICT education in rural schools. The government donated computers to schools that had electricity. The donation introduced another problem: the schools that got the computers had not planned for them, and they remained idle housed in store rooms (Sithole, 2014). The computers became a liability as schools converted classrooms to become computer laboratories (Konyana & Konyana, 2013) because these rural schools have classroom space limitations for the population of students they serve.

In addition, schools that did not have electricity had to electrify the building that housed the computers at a cost to the school (Tshabalala & Ncube, 2014). The schools did not have competent, qualified ICT teachers. Konyana and Konyana (2013) found that most schools used the computers for administrative purposes, such as typing and, storing administrative and financial records. The computers were used for generic purposes because there are no qualified teachers who can teach with computers in the rural schools (Sithole, 2014). In this case, computers are inaccessible for students, as they are in the hands of the administration. Thus, teaching and learning has largely remained rooted in the traditional models of delivery, mainly lectures (Konyana & Konyana, 2013).

The problem rural schools face is the prohibitive costs of the computer purchase (Sithole, 2014). While buying the computers is one issue, maintaining them is another. Most rural schools do not have enough in their budgets to run a successful ICT department (Tshabalala & Ncube, 2014). Although the government of Zimbabwe embarked on a program of donating computers around the country especially in the rural areas the problems mentioned above inhibit their maximum utilization.

The results of this study provide insight into understand the experience of using computers by students whose schools have computers. The literature has shown that many students in the rural areas do not have access to computers as they are only exhausted by administrators and teachers. In addition, the literature shows that students in the rural areas do not have smartphones that they can use to access Internet. The voice of the rural students who have used computers is not represented in the current literature. In order to properly address the digital gap, it is imperative to understand the lived experiences of those students. Through phenomenological approach the focus of this study is understand the depth and meaning of these experiences (Hays & Singh, 2012).

2.1.1. Statement of the problem and research questions

Students in the rural areas are lagging behind in the use of technology for communication as well as educational purposes. The students in the rural schools do not have readily accessible computers and the few who do tend to use the computers for generic purposes of the computers, such as for typing and document printing (Konyana & Konyana, 2013). The introduction of Computer Studies as a subject, and being taught by qualified teachers, might help rural students to use computers for more appropriate educational tasks. The presence and ineffective use of the rural schools' computers has intrigued and engendered in me a strong desire to understand what is happening with these students. As such I decided to carry out this study to understand the depth and essence of the lived experiences of students who have used computers.

The following research questions frame this study.

1. How do Advanced Level students in the rural areas use computers at their schools?
2. What are the experiences of using computers for Advanced Level students in the rural schools of Zimbabwe?

2.1.2. Purpose of the study

The purpose of this phenomenological study is to understand the depth and meaning of participants' (Advanced Level students) lived experiences of using computers at two rural Catholic High Schools in Zimbabwe.

3. Method

3.1. Design

A qualitative approach was used for this study as I sought to understand the lived experiences in using computers by Advanced Level students at two schools in rural Zimbabwe. Creswell (2014) defines phenomenological research as a design of inquiry "in which the researcher describes the lived experiences of individuals about a phenomenon as described by participants" (p.14). The focus is on the essence of the experiences for students who have used a computer. Though this phenomenological study, I sought to understand the depth and meaning of lived experiences of using computers from the view of the participants.

In order to achieve a deep understanding of the phenomenon, I rigorously and systematically examined the use of computers by students (Ajjawi & Higgs, 2007).

This qualitative phenomenological study was done through interviews and observation of Advanced Level students on their experiences of using computers. Through interviewing I was able to connect with the lived experience of the Advanced Level students and their views on their use of computers. In phenomenology, the primary method of data collection is interviewing, "whereby one attempts to uncover the essence, the invariant structure, of the meaning of the experience" (Merriam and Associates, 2002, p. 93).

Phenomenological research, as with most qualitative research, has some inherent characteristics, namely: (a) "the researcher is the primary instrument for data collection and analysis, (b) the study involves field work, and (c) the study usually employs an inductive research strategy" (Merriam, 1992, p. 6). The data is mediated through a human instrument, and as a researcher, I had to be physically present in the natural setting.

3.2. Participants

The 15 participants were all Advanced Level students drawn from two rural Catholic boarding high schools in the Midlands Province of Zimbabwe. The two Catholic High Schools were chosen for this study because they had computers and each had a trained Computer teacher. All the students who participated in the study volunteered. The students were enrolled in Arts and Business studies at the two schools. All the participants were aged 18 and older. No reward was given for participating in the study. The sampling procedure chosen to select the participants was purposeful selection (Maxwell, 2013) targeting students who claimed to have used a computer. Pseudonyms have been used throughout this research paper for the purposes of privacy and anonymity.

Table 1. *Demographic characteristics of respondents* (n = 6)

Student Number	*Gender*	*Student Age*	*Own Computer (Yes/No)*	*Own a Smart Phone (Yes/No)*	*Used a Computer (Yes/No)*	*Level of knowledge using Computer (Beginner, Intermediate, Expect)*
1	Male	19	Y	Y	Y	Intermediate
2	Male	20	Y	Y	Y	Expect
3	Male	19	Y	Y	Y	Intermediate
4	Female	18	N	Y	Y	Beginner
5	Male	18	N	N	Y	Beginner
6	Female	19	Y	Y	Y	Intermediate
7	Female	19	Y	Y	Y	Intermediate
8	Female	18	N	N	Y	Beginner
9	Male	20	Y	Y	Y	Intermediate
10	Male	21	N	Y	Y	Intermediate
11	Female	20	Y	Y	Y	Intermediate
12	Female	18	Y	Y	Y	Intermediate
13	Female	19	N	N	Y	Beginner
14	Male	19	Y	Y	Y	Expert
15	Male	20	Y	Y	Y	Intermediate

4. Data Collection

4.1. Interviews

In phenomenological studies, data collection consists of in-depth interviews and multiple interviews with participants (Creswell, 2007). In-depth interviews were used to collect data from the 15 participants who experienced the phenomenon. The data collection process involved extensive and prolonged engagement with participants to develop relationships. According to Moustakas (1994), in phenomenological studies participants are asked two broad questions about the phenomenon and then other open-ended questions will be asked later. The two general questions I asked were: (a) What have you experienced in terms of using the computer? and (b) What are the situations that have affected your experiences of using a computer?

4.2. Focus Groups

Another method of data collection that I used was focus group interviews with the same students interviewed. The participants were divided into three small groups with 5 participants in each. In order for me to facilitate the focus groups, I asked (open-ended) questions. Each focus group session was audio-recorded. Conducting focus groups allowed participants to share their views on their lived experiences of using computers at school and also helped me to clarify themes that were identified through the analysis of individual interviews. All the audio-recorded interviews were transcribed verbatim.

4.3. Observation

The reason for using participant observation in my study is that it made it possible for me to collect a different type of data. As the researcher, I was on site for four days. It gave me time to become familiar with the community of teachers and students (Kawulich, 2005). This involvement allowed me to generate sensible questions based on my observations. I managed to track the participants who visited the computer lab and the way they interacted with their teachers and colleagues. I managed to write in my field note book (Maxwell, 2013) what I observed during my four-day stay at each school. Although my focus was on the participants, I also recorded what I observed in the computer room that I considered necessary for my study. Spending time with the community helped me to better understand what was happening.

4.4. Trustworthiness

In addition I collected data through formally written responses on their experiences, as I asked them to respond to questions individually. I used triangulation (using different sources of data) as a way of trustworthiness because it "allows the reader to look for alternative interpretations" (Graneheim & Lundman, 2003 p. 110). Data collection using individual interviews, focus groups, observation, and a questionnaire that each participant completed enabled this triangulation.

5. Data Analysis

Before data analysis, I had to bracket my bias and assumptions about the study's focus (Hays & Singh, 2012). The first step of data analysis process is transcription itself (Hammesley, 2010). The necessary step in phenomenological data analysis is horizonalization, where I began to identify non-repetitive, non-overlapping statements in participants' transcript (Hays & Singh, 2012). I, then, began to refine the data into new categories in a process that is called textural description (Moustakas, 1994) so that I understand the meaning and depth of the essence of the experience. Moustakas (1994) advises researchers to include verbatim examples, which I have for each of the participants'

experiences. The next process in data analysis that I performed was structural description. With structural description, I identified multiple potential meanings within the textural description of the phenomenon. I had to identify and construct composite textural-structural descriptions of the meanings and essences of each individual's experience, incorporating the invariant constituents and themes into a universal description of the experience representing the whole group (Hays & Singh, 2012; Moustakas, 1994). After completing this process common themes or essences emerged which are: worthwhile (interesting) experience, accessibility issues, teachers' monopoly, research and social use, and internet availability.

6. Results

6.1. Descriptive Statistics

The phenomenological study show that Advanced Level students have some common lived experiences of using computers which they shared. The descriptive statistics showed that the average age of all the students was 19.13, and the female average age was 18.71 while that of males is 19.5. Of the 15 Advanced High School participants, 53.33% were males and 46.67% females. All the students had experienced the phenomenon of using a computer. 66.67% of the participants said they owned a computer, and the remainder of 33.33% did not own the computer. In addition, 80% of the participants said that they owned smartphones, but school policy does not allow students to bring them to school. Although the participants experienced the phenomenon of using computers in this study, 26.67% considered themselves to be at a beginner's level, 60% were at intermediate level and 13.33% considered themselves as experts at using a computer.

6.2. Qualitative Results

Data analysis showed themes of students having experienced a phenomenon with using technology, namely: worthwhile (interesting) experience, accessibility issues, teachers' monopoly, research and social use, and internet availability. The students also raised problems they encounter when using the computer at school. The students attributed some of the problems they experience when using the computers to their teachers whom they labelled as "insensitive, insecure and not caring." Some of the students also said teachers interfered with their use of computers.

6.2.1. *Theme 1: Worthwhile (interesting) experience*

The students said that using the computer was a worthwhile, interesting, and eye-opening experience. They learned the basic principles of computers. Researching for information using computers was something the students enjoyed as they had never done that before. The students stated that they were very happy to use the computer, and always want to use the computer to search for information. The students said that operating a computer on their own felt good, as they had never done that before and asked the school administrators to increase computer access to students.

> *"Usually I face difficulties due to network problems which is usually caused by lack of subscriptions (paying for internet service to providers) especially at school" (Student 6)*

> *"The experience was worthwhile because we learned the basic principles of computers and the experience is interesting" (Student 8)*

6.2.2. *Theme 2: Accessibility issues*

Another theme that emerged from the study is that of accessibility. The students reiterated that the computers at the school are few, and as a result not all students have access to

computers. The students said that they are crowded in the computer lab most of the times. To make matters worse, students said they are only allowed to use the computers during specified times. Students complained that computer usage times are short, hence, not enough. Another accessibility issue pertains to Internet connection. When school acquired the computers, students had the experience of using the computer without Internet as there was no Internet connection at the school. Although the participants agreed that their schools had Internet access, they stated that the connection is not powerful maybe due to the remoteness location of the school.

> *"The computers at school are crowded and you may use it for a few minutes when you get the chance because of time" (Student 1)*
>
> *"It's rather boring mainly because of the poor internet service around the school and we only have limited time to use computers, nekuti mashoma (because they are few)" (Student 3)*

6.2.3. *Theme 3: Teachers' monopoly*

Another major theme that emerged from data analysis is the perceived teachers' monopoly when it comes to the use of computers. According to students, teachers normally get first preference in using computers. The students complained that teachers would chase them away from the computer lab, and as such, do not get the necessary experience in using the computer. Two students who considered themselves to be experts at using computers reiterated that Mr. S, Mr. T, Mrs. Y, and Mrs. H are some of the teachers who exhibit some jealousy that students are skilled at using computers. Some of the students proposed that teachers should buy their own computers, and not rely on school computers since those computers at school are for use by the students. Several students said that the experience of using computers at school is frustrating because teachers do not give students more time to use the computers. This is what some students said about teachers monopolizing the computers:

> *"Not pleasing at all due to teachers' resistance for students to use, and they end up chasing us away. Mr. T and Mrs. H are a pain in the back because they feel threatened by us because we have a Certification in Computers … and do not allow us to use them (computers)" (Student 14). "Student 14, do not forget that Mr. S and Mrs. Y feel threatened by our knowledge of computers" (Student 2).*
>
> *"Very poor because teachers do not want to use computers and prevent students from using computers" (Student 15)*
>
> *"Teachers treat school computers as their own computers and do not give students chance to use them." (Student 10)*

From the students' responses it is concluded that temporary teachers at the two schools were not given a chance to teach or use the computers because they were not going to stay for long at the school. Temporary teachers in Zimbabwe are generally high school graduates who are not trained teachers. They do not get support because they are considered relief for teachers who will be at a school for a short period of time.

6.2.4. *Theme 4: Research and social use*

Use of computers for research and social networking constitutes another theme that emerged from this study. The students said that they used the computers for research and school work as prescribed by their teachers. In this area, they said they were amazed at how the computer generated a lot of information in their subject areas. Students said they only use the computers at school to research, but if the computer room is not crowded they sometimes

use the computer for entertainment. They would communicate with friends using Facebook, and Skype. The students claimed that the only unfortunate thing is that the teachers are either unable or unwilling to use computers for instruction. As a result, the experience of computer usage is self-taught or through the help of a peer. The students admitted that the computer is a learning tool that needs to be used by all students if they are to pass their exams. Three students described their computer usage as:

"For my subject research such as History, Literature and Divinity, but I also use it for social networks like Facebook, and skype" (Student 4)

"For educational research and improvement in knowledge through research" (Student 7)

"I use the computer to relax by playing games, going on Facebook, downloading music, and watching movies on YouTube." (Student 9)

The students also pointed out that they use their smartphones, as well, to research and do other social activities. When asked if they used their smart phones in class, most students say that they did not because they fear that teachers would confiscate them. The school policy does not allow students to bring cell phones to school, and if caught the cell phone would be taken away and only be returned at the end of the school term.

> *"Research using a smart phone is fun because it is easy to use. I also use my phone to communicate with others through WhatsApp and Facebook" (Student 5)*
>
> *"I like a smart phone, but the school policy does not allow us to bring them to school, hence we hide them and only use them while at the dorms (hostels)." (Student 12)*

6.2.5. *Theme 5: Internet availability*

The last experience students face is that of network issues. In most cases, the Internet network is down, and students said that they may end up only using computers to play and navigate on some features available. Even when there is a network connection, the students claimed that the Internet will be slow, making it frustrating to use the computers.

> *"We have to share because there are scarce number of computers and the network is very poor" (Student 13)*
>
> *"There is bad signal of internet network maybe because we [the school] are in the rural areas where network connection is bad." (Student 1)*
>
> *"Usually I face difficulties due to network problems which is usually caused by lack of subscriptions especially at school" (Student 11)*

In addition, to poor Internet service, there is also the issue of the lack of electricity. The students attributed electricity unavailability is due to load shedding by the government. The students explained that electricity is sometimes available during odd hours when they can no longer access the computer room.

7. Discussion

The purpose of this phenomenological study is to understand the depth and meaning of participants' (Advanced Level students) lived experiences of using computers at two rural Catholic High Schools in Zimbabwe. Through interviews, observation and use of focus groups, it was discovered that students experienced worthwhile (interesting) experience, accessibility issues, teachers' monopoly, research and social use, and Internet availability issues.

The Advanced Level school participants in this phenomenological study cited the lived experience of using computers as being worthwhile (interesting). A computer has many

features and a new user may normally find operating a computer interesting. Students are captivated in learning computer usage because it makes learning easier and engaging. Previous research by Heafner (2004) found that the use of technology motivates students through engagement in the learning process. The study found that without the use of technology, students were disconnected to the learning process. This study found that the use of a computer was a motivating factor as many students wished to continue using the computer to learn and search for information. Barger and Byrd (2011) supports Heafner's (2004) claim by pointing out that computer-based learning has a broad potential for improving motivational and instructional design. Like other studies, (Sithole, 2014; Smith, 2014) this research study found that the use of computer-based learning may encourage fun and exciting ways to learn and may result is increased pass rates.

This study found that there are problems in the rural areas that affect accessibility issues. This study revealed that rural schools have few computers, and most of these computers where donated by the government of Zimbabwe through the president (Madzanire & Meier, 2014). Many rural schools do not have electricity and have poor Internet connectivity such that Internet use in the teaching and learning is non-existent. This study found that students use computers without Internet connection.

Students in this study cited teachers' monopoly of the computers as one of the experiences they had using computers at their schools. This finding is a new phenomenon particularly in Zimbabwe, as there is no literature that was found in the area to support this finding. Hence this new phenomenon contributes to the body of literature. Literature on the subject indicates that students and teachers in rural areas were both scared and had negative attitude to the use of computers in education (Bukaliya & Mubika, 2012). One evidence from the study that might help explain why teachers monopolize the use of computers is that the computers are few. Since the computers are few, the teachers may then use their position to get first preference in accessing and using the computers. The other reason might be that teachers who are computer illiterate may want to use the school computers to learn and be computer literate at the expense of the students.

Research was a key theme that emerged from this study. Students research by using computers at school, and at times, on their smartphones. Researchers in Zimbabwe and those from other countries argue that smart phones should no longer be regarded as texting and calling devices, but as a desirable learning tool (Madzanire & Meier, 2014; Omarsson, 2014). The students in the study were all in agreement that school authorities do not allow students to bring cell phones to school. Instead of impounding the smart phones, they suggest that the phones to be used as a way to enhance learning possibilities, turning distractions into learning opportunities that will benefit students (Omarsson, 2014).

Another issue the students identified from their experiences was Internet availability. It was viewed as a problem that is common not only to the two rural schools, but a reflection of all the rural areas, as also noted by other researchers (Bukaliya & Mubika, 2012; Sithole, 2014). Rural areas generally have low Internet connectivity in Africa. The problem is due to high cost to the end-users of the Internet. Bon (2007) posit that on average, an African consumer pays 240 times as much for the same internet connection as someone in the Netherlands. Although this is the case, smart phone use might be the solution to Internet problems. Mobile phones are popular with people in Africa's rural areas because of the lack of physical connectivity and access to reliable electricity (Smith, 2014). Stork, Calandro, and Gillwald (2013) argued that mobile phones can be used by students to access Internet cheaper as compared to accessing it using the computer. Smart phones and data are cheap. Smartphones have faster transmission speeds. Most people in Africa use mobile phones for

online activities that people in other countries perform on desktop or laptop computers (Smith, 2014). The Internet availability problem is not limited to schools. The whole African continent has little access to the Internet.

8. Conclusions and Recommendations

The insight gained from studying the lived experiences on using the computer by Advanced level students in rural Zimbabwe may be used to find ways of improving computer and Internet access in the country's schools. Since the study has established that students said the experience of using a computer was worthwhile and expressed willingness to continue using the computer, there is need to increase access of students to computers. One way to increase the access might be to elicit the support of donors, government, and well-wishers to provide support for the purchase of more computers.

In terms of teachers' monopoly, teachers may be encouraged to purchase their own computers for personal use. In addition, the teachers might be given specific times that they can use the computers without interfering with students who will be using the computers. Teachers should be encouraged to use computers when teaching, with additionally viewing the Internet as a source of information.

The issue of cellphone use in schools is a controversial one. Most schools in Zimbabwe do not allow students to bring mobile phones to school. The recommendation that I can provide in this area is for schools to allow students to bring mobile phones to schools. Schools might establish "acceptable use standards" for those students who bring mobile phones. For example, using the phone in the classroom in support of the lesson being taught or the work assignment being executed may be acceptable. Internet access is low in rural areas, but mobile phones have fast data speeds. Smart phones should be seen as the key entry point for Internet use (Stork, et al., 2013). Africa's mobile phone use is predicted to increase 20-fold in the next five years and is fast becoming regarded as the "mobile continent" (Smith, 2014). It is a digital mobile revolution taking Africa by storm. To imagine that the rest of Africa is moving ahead in the adoption of mobile technology and school administrators are banning their use is purely counterproductive.

The study was limited to Advanced Level students drawn from two rural boarding Catholic High Schools in the Midlands province of Zimbabwe. This limits the applicability of the results of the study to other rural schools, as the nature of computer use in Catholic Schools and in boarding schools may be unique in other ways not yet understood. The participants were all Advanced Level students and no Ordinary Level students were part of the study. The study contributes to the body of literature concerning the need for the adoption, increase, and exposure of computer and other related technology to the teaching and learning of students at the Advanced Level in Zimbabwe's schools. Mobile technology is essential in this regard and should be allowed in schools. The government, stakeholders, and schools should work together to bridge the digital divide that exist between schools in urban and rural areas. Students learning in rural areas must be brought online.

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